Amendments to the Claims:

1. (previously amended) A method of determining a protection route in a network for links having a wave division multiplexing (WDM) color associated therewith, said method comprising the steps of:

removing from consideration all logical links having a color other than that of the link to be protected to generate a single color logical topology;

removing from consideration the link to be protected from the single color logical topology; and

generating a restoration path for the link to be protected from said single color logical topology only.

2. (currently amended) The method according to claim [[0]] 1, further comprising the step of configuring one or more nodes in said network in accordance with said restoration path.

3. (currently amended) The method according to claim [[0]] 1, wherein said links share a same optical fiber using WDM.

4. (currently amended) The method according to claim [[0]] 1, wherein said links span more than a single fiber utilizing WDM means.

5. (currently amended) The method according to claim [[0]] 1, wherein said logical topology comprises the topology of the links of the network.

6. (currently amended) The method according to claim [[0]] 1, further comprising the step of assigning a virtual color to each link equal to its physical color.

7. (currently amended) The method according to claim [[0]] 1, wherein generating said restoration path comprises executing a routing algorithm capable of generating a route based on said single color logical topology.

8. (original) The method according to claim 7, wherein said routing algorithm is chosen from the group comprising Dijkstra, Breadth First Search (BFS) and Depth Search First (DFS).

9. (previously amended) The method according to claim 2, wherein said step of configuring comprises utilizing a signaling protocol chosen from the group comprising Reservation Protocol with Traffic Extensions (RSVP-TE) and Constraint based Label Distribution Protocol CR-LDP).

10. (previously amended) The method according to claim 2, wherein said step of configuring comprises utilizing a network-management protocol such as SNMP.

11. (currently amended) The method according to claim [[0]] 1, wherein said method is implemented in a Network Management System (NMS).

12. (currently amended) The method according to claim [[0]] 1, wherein said method is implemented in nodes within said network.

13. (currently amended) The method according to claim [[0]] 1, further comprising the step of switching traffic in the event of a link failure to a restoration path associated with said link failure.

14. (previously amended) A method of determining a protection route in a network, said method comprising the steps of:

assigning a virtual color to logical links within said network;

removing from consideration all logical links having a virtual color other than that of the link to be protected to generate a single color logical topology;

removing from consideration the link to be protected from the single color logical topology; and

generating a restoration path for the link to be protected from said single color logical topology only.

15. (original) The method according to claim 14, further comprising the step of configuring one or more nodes in said network in accordance with said restoration path.

16. (previously amended) The method according to claim 14, wherein said links share a same optical fiber using WDM.

17. (original) The method according to claim 14, wherein said links span more than a single fiber utilizing WDM means.

18. (original) The method according to claim 14, wherein said logical topology comprises the topology of the links of the network.

19. (previously amended) The method according to claim 14, wherein a default virtual color of each link is equal to its physical color.

20. (original) The method according to claim 14, wherein generating said restoration path comprises executing a routing algorithm capable of generating a route based on said single color logical topology.

21. (original) The method according to claim 20, wherein said routing algorithm is chosen from the group comprising Dijkstra, Breadth First Search (BFS) and Depth Search First (DFS).

22. (original) The method according to claim 14, wherein said step of configuring comprises utilizing a signaling protocol chosen from the group comprising Reservation Protocol with Traffic Extensions (RSVP-TE) and Constraint based Label Distribution Protocol CR-LDP).

23. (original) The method according to claim 14, wherein said step of configuring comprises utilizing a network-management protocol such as SNMP.

24. (original) The method according to claim 14, wherein said method is implemented in a Network Management System (NMS).

25. (original) The method according to claim 14, wherein said method is implemented in nodes within said network.

26. (previously amended) The method according to claim 14, further comprising the step of switching traffic in the event of a link failure to a restoration path associated said link failure.

27. (previously amended) A method of determining a protection route in a network for links having a wave division multiplexing (WDM) color associated therewith, said method comprising the steps of:

assigning a virtual color to logical links within said network;

assigning virtual colors to links within a bundle of optical fibers such that the same virtual color does not appear more than once across all fibers within each bundle of optical fibers;

removing from consideration all logical links having a virtual color other than that of the link to be protected to generate a single color logical topology;

removing from consideration the link to be protected from the single color logical topology; and

generating a restoration path for the link to be protected from said single color logical topology only.

28. (original) The method according to claim 27, further comprising the step of configuring one or more nodes in said network in accordance with said restoration path.

29. (previously amended) The method according to claim 27, wherein said links share a same optical fiber using WDM.

30. (original) The method according to claim 27, wherein said links span more than a single fiber utilizing WDM means.

31. (original) The method according to claim 27, wherein said logical topology comprises the topology of the links of the network.

32. (previously amended) The method according to claim 27, wherein a default virtual color of each link is equal to its physical color.

33. (original) The method according to claim 27, wherein generating said restoration path comprises executing a routing algorithm capable of generating a route based on said single color logical topology.

34. (original) The method according to claim 33, wherein said routing algorithm is chosen from the group comprising Dijkstra, Breadth First Search (BFS) and Depth Search First (DFS).

35. (original) The method according to claim 27, wherein said step of configuring comprises utilizing a signaling protocol chosen from the group comprising Reservation Protocol with Traffic Extensions (RSVP-TE) and Constraint based Label Distribution Protocol CR-LDP).

36. (original) The method according to claim 27, wherein said step of configuring comprises utilizing a network-management protocol such as SNMP.

37. (original) The method according to claim 27, wherein said method is implemented in a Network Management System (NMS).

38. (original) The method according to claim 27, wherein said method is implemented in nodes within said network.

39. (previously amended) The method according to claim 27, further comprising the step of switching traffic in the event of a link failure to a restoration path associated said link failure.

40. (previously amended) A computer program product for use in a network device, said computer program product comprising:

a computer useable medium having computer readable program code means embodied in said medium for determining a protection route in a network for links having a wave division multiplexing (WDM) color associated therewith, said computer program product comprising:

computer readable program code means for removing from consideration all logical links having a color other than that of the link to be protected to generate a single color logical topology;

computer readable program code means for removing from consideration the link to be protected from the single color logical topology; and

computer readable program code means for generating a restoration path for the link to be protected only from said single color logical topology.

41. (original) The method according to claim 40, wherein said network device comprises a Network Management System (NMS).

42. (original) The method according to claim 40, wherein said network device comprises a network node.

43. (original) The method according to claim 40, further comprising the step of switching traffic to the restoration path associated said link failure in the event of a link failure.